							SOIL							GROUNDWA <sup>*</sup>	TER		
							OOIL				USEPA TCLP			OKOOKDWA			<u> </u>
		VOCs			SVOC	•		Metals			Hazardous Wa Le	ste Regulatory	VOCs	SVOCs	Metals		
		(mg/kg)			(mg/kg			(mg/kg			_	g/L)	(ug/L)	(ug/L)	(ug/L)		
			Source of	of Data		Source	of Data		Source	of Data	Benzene	Lead					
		Contaminant and Range of		Dro	Contaminant and Range of Exceedences of NJDEP		Bro	Contaminant and Range of Exceedences of NJDEP		Bro	Bongs of	Bango of	Contaminant and Range of	Contaminant and Range of	Contaminant and Range of	Presence of LNAPL	·
SWMU / AOC	Description	Exceedences of NJDEP NRDSCC	CMS	Pre- CMS	NRDSCC (NRDSCS for Naphthalene)	смѕ	Pre- CMS	NRDSCC (NRDSCS for Lead)	CMS	Pre- CMS	Range of Exceedences	Range of Exceedences	Exceedences of NJDEP GWQS	Exceedences of NJDEP GWQS	Exceedences of NJDEF GWQS	Thickness > 0.01 Feet	Corrective Measures
					- raprimatorio,								0.1.43	311.43	0.1.20		Basin clean closed. In the process of
SWMU 1	North Field Basin									-							creating tidal wetland. Closure work essentially complete.
SWMU 2	Surge Pond																Will file deed notice and continue with O&M.
SWMU 3	East Yard Basin (EYB)																Currently monitoring closure wells. In the process of filing deed notice with conditional NFA.
SWIVIO 3	Edst Falu Basiii (ETB)																NFA granted on 4/12/06. In the process of lifting deed notice. Located
SWMU 4	Landfarm																in the Amboy Field and not part of the CMS.
30000 4	Landami				Acenapthene (4.3 - 11);												CIVIG.
					Anthracene (4.8 - 11); Benzo(a)anthracene (5.8												
					- 16); Benzo(a)pyrene (6.7 -												ISCO Treatment for organic
					16);								Groundwater modeling of				contaminants in soil, In-Situ
		Benzene (17 - 82); Ethylbenzene (35 - 150);			Chrysene (10 - 25); Naphthalene (31 - 180);								PCOCs within this SWMU demonstrated				Stabilization for lead in soil, install a non-RCRA cap, and file a deed notice
		Toluene (15 - 130);			Phenanthrene (30 - 94);								benzene exceedences				afterwards. Continue LRMs, and MNA
SWMU 5	TEL Burial Area West of Surge Pond	Xylenes (120 - 1,200)	Х		Pyrene (13 - 33)	Х		Total Lead (941 - 3,010)	Χ		0.57 - 0.88	None	between 1 and 100 ug/L.			Х	for groundwater.
								Total Lead (2,150 -									ISCO Treatment for organic contaminants in soil, and In-Situ
								8,340);									Stabilization for lead in soil and file a
SWMU 6	TEL Burial Area North of Tank 306	Benzene (23)		Х	Benzo(a)pyrene (0.96)		Х	TEL (33.3); TOL (2.9)	Х	X	NAN	NAN	Benzene (22)	None	Iron - Total (37,500); Iron-Dissolved (38,500)	X	deed notice afterwards. Continue LRMs, and MNA for groundwater.
	TEE Sund. 7 HOU THE HE TO THE	Delizano (Ed)			201120(0)py10110 (0100)			Copper (698 - 2,250);				10.00	201120110 (22)	1.10.10	1.0 2.000.100 (00,000)		In-situ Stabilization for lead in soil and
								Total Lead (1,640); TOL (96.9);					Groundwater modeling of	PCOCs within this SWMI	I demonstrated no		file a deed notice afterwards. CMS recommendation is NFA for
SWMU 7	TEL Burial Area East of Tank 305	None		Χ	Benzo(a)pyrene (1.5)		Х	Zinc (6,320)		Х	None	None	exceedences (see footnot		demonstrated no		groundwater.
																	ISCO Treatment for organic
													1,2-Dichloropropane (2);				contaminants in soil, and Excavation,
													Benzene (570).				Ex-Situ Stabilization and Disposal in
													Additionally, groundwater modeling of PCOCs		Arsenic (70);		Tailored CAMU for lead in soil. Continue LRMs. ISCO Treatment for
								Total Lead (2,280 -					within this SWMU	2, 4 - Dimethylphenol	Iron - Total (35,200);		benzene concentrations >100 ug/L,
		Benzene (40 - 820); Toluene (2,400 - 2,600);			Benzo(a)pyrene (0.68 -			176,000); TEL (4.1 - 11);					demonstrated benzene exceedences	(180); Bis(2-ethylhexyl)pthalate	Lead (470);		and MNA for benzene concentrations between 1 and 100 ug/L in
SWMU 8	TEL Burial Area Northwest of EYB	Xylenes (2,300 - 2,700)	Х	Χ	0.94)	Х	Х	TOL (125 - 2,400)	Χ	Х	5.5	35.3 - 801	between 1 and 100 ug/L.	(BEHP) (14)	Sodium (267,200)	Х	groundwater.
																	NFI granted 4/1/98. NFA for soils requested in 11/03. CMS
													Groundwater modeling of	PCOCs within this SWML	J demonstrated no		recommendation is NFA for
SWMU 9	TEL Burial North of Tank 753	None		Х	None		Х	Thalium (4.4)		Х	NAN	NAN	exceedences (see footnot	te 26).			groundwater.
																	Excavation, Ex-Situ Stabilization and
																	Disposal in Tailored CAMU for TCLP
																	lead levels > 5 mg/L, and In-Situ Stabilization for TCLP lead levels <5
								Arsenic (73.8);									mg/L and lead levels >800 mg/kg in
								Copper (1,000);							Arsenic (10.7);		soil and file a deed notice afterwards.
								Total Lead (1,090 - 41,600);							Iron - Total (30,300); Iron - Dissolved (7,150);		ISCO Treatment for benzene concentrations >100 ug/L, and MNA
								TEL (780);							Manganese (1,050);		for benzene concentrations between
SWMU 10	2 TEL Burials Southwest of Tank 771	None		X	Benzo(a)pyrene (2.8)		X	TOL (38.6)	X	X	NAN	9.33 - 38.7	Benzene (13 - 280)	(130)	Sodium (149,000)		1 and 100 ug/L in groundwater.

	T					8011						<del> </del>	GROUNDWA	TED		
						SOIL	<u> </u>			USEPA TCLP	Characteristic		GKOUNDWA	IER		-  <b> </b>
											aste Regulatory					
		VOCs		SVC			Metal				evel	VOCs	SVOCs	Metals		
		(mg/kg)	urce of D	(mg		of Data	(mg/kg	Source of	Data	Benzene	g/L) Lead	(ug/L)	(ug/L)	(ug/L)		
		300	arce or D	Contaminant and	Source	J Data	Contaminant and	30urce or	Data	Delizerie	Leau	1				
		Contaminant and		Range of			Range of					Contaminant and	Contaminant and	Contaminant and	Presence of	f
		Range of Exceedences of NJDEP	P	Exceedences of NJD NRDSCC (NRDSCS f		Pre-	Exceedences of NJDEP NRDSCC (NRDSCS for	'	Pre-	Range of	Range of	Range of	Range of	Range of Exceedences of NJDE	LNAPL P Thickness	
SWMU / AOC	Description	NRDSCC CN			CMS	CMS	Lead)		CMS	Exceedences	Exceedences	GWQS	GWQS	GWQS	> 0.01 Feet	Corrective Measures
	TEL Busin Anna Alana Bailean						T-1-111 (4.000)									In-situ Stabilization for lead in soil and
SWMU 11a	TEL Burial Area Along Railroad Tracks	None		Benzo(a)pyrene (3.1)		×	Total Lead (1,820); TEL (3.45)		Х	NAN	NAN					file a deed notice afterwards. NFA for groundwater granted on 1/21/05.
OVVIIIO 114	Tradite	ITONO		Σοπεσ(α)ργισπο (στι)			1.22 (0.10)	1 1		10.00	10.00					CMS recommendation is NFA for soil.
														Iron-Total (312,000);		NFA for groundwater granted on
SWMU 11b	2 TEL Burials Areas Along Rail Road Tracks	Soil modeling of PCOCs within	thic SMM	I demonstrated no exceeds	nces							None	None	Manganese (20,300); Sodium (163,000)	×	1/21/05. Continue LRMs for groundwater.
SVVIVIO 11b	TIACKS	3011 modelling of 1 COC3 within	UIIS SVVIV	J demonstrated no exceede	11063.							None	INOTIC	30didiii (103,000)		In-situ stabilization for lead in soil and
																file a deed notice afterwards. CMS
CVA/AALLAO	3 TEL Burial Areas West of Tank 27	None		Panza(a)nyrana (2.2)		X	Total Lead (1,060); TEL (2.67)		Х	NANI	NIANI	Groundwater modeling of		U demonstrated no		recommendation is NFA for groundwater.
SWMU 12	3 TEL Bullai Aleas West of Talik 27	None		Benzo(a)pyrene (2.3)			1EL (2.07)		Λ	NAN	NAN	exceedences (see footnot Groundwater modeling of		J demonstrated no		CMS recommendation is NFA for soil
SWMU 13	TEL Burial Area West of Tank 28	Soil modeling of PCOCs within	this SWM	J demonstrated no exceede	nces.							exceedences (see footnot				and groundwater.
														Iron - Total (8,880);		CMS recommendation is NFA for soil.
SWMU 14	2 TEL Burial Areas East of Tank 23	Soil modeling of PCOCs within	thic SWM	I demonstrated no exceeds	nces							None	None	Manganese (2,160); Sodium (96,200)		NFA for groundwater granted on 1/21/05.
OVVIVIO 14	2 TEE Band 7 Todo Edot of Tank 20	Soli modeling of 1 cocs within	UIIS OVVIV	S demonstrated no exceede	11003.							110110	140110	Codiam (00,200)		172 1700.
																Excavation, Ex-Situ Stabilization and
																Disposal in Tailored CAMU for benzo(a)pyrene concentrations >10
SWMU 15	TEL Burial Area South of Tank 14	None		Benzo(a)pyrene (15)		х	None		Х			Benzene (5)	NAN	NAN		mg/kg in soil. MNA for groundwater.
				(71)												Ţ,
														A (00)		ISCO Treatment for organic
														Arsenic (28); Iron - Total (59,300);		contamination in soil, and Excavation, Ex-Situ Stabilization and Disposal in
				Benzo(a)anthracene			Arsenic (25 - 78.2);							Lead (7.3);		Tailored CAMU for TOL
	TEL D	Benzene (15 - 6,200);	,	(9.5);		.,	Copper (1,940);		.,			D (0.000)	0.4 5: 11 1.4.70	Manganese (15,400);		concentrations >2 mg/kg in soil. ISCO
SWMU 16	TEL Burial Area South of Tank 306	Xylenes (2,200) X	( )	Benzo(a)pyrene (2.8)		Х	TOL (10.1)		Х	None	NAN	Benzene (2,300)	2,4-Dimethylphenol (170	) Sodium (357,000)		Treatment for groundwater.
												Groundwater modeling of				ISCO Treatment for organic
												PCOCs within this				contaminants in soil, and Excavation,
		Benzene (16 - 58);		Benzo(a)pyrene (1.7 -			Total Lead (2,160);					SWMU demonstrated benzene exceedences				Ex-Situ Stabilization and Disposal in Tailored CAMU for lead in soil. ISCO
SWMU 17	TEL Burial Area East of Tank 301	Xylenes (2,200) X				X	TOL (2.8 - 117)		Х	None	5.19	>100 ug/L.				Treatment for groundwater.
				-,		<u> </u>										J 1 J 1 J 1 J 1 J 1 J 1 J 1 J 1 J 1 J 1
		Ponzono (45 2 - 00 000):														ISCO Treatment for arrania
		Benzene (15.3 - 26,000); Ethylbenzene (160,000);														ISCO Treatment for organic contaminants in soil, and In-Situ
		Toluene (1,020 - 9,700);					Total Lead (1,110 -									Stabilization for lead in soil and file a
		Xylenes (3,800 -	_				5,060);		.,				2,4-Dimethylphenol			deed notice afterwards. ISCO
SWMU 18	TEL Burial Area West of Tank 301	220,000) X	( )	None Benzo(a)anthracene (2	0 -	Х	TOL (78.1 - 360)	X	Х	0.52	NAN	Benzene (840)	(2,700)	Lead (13)		Treatment for groundwater.
				45):	3 <b>-</b>											
				Benzo(a)pyrene (0.76												ISCO Treatment for organic
				71);												contaminants in soil with
				Benzo(b)fluoranthene (16 - 22);												benzo(a)pyrene concentrations <10 mg/kg, and Excavation, Ex-Situ
				Chrysene (49 - 76);								Groundwater modeling of				Stabilization and Disposal in Tailored
		Benzene (200);		Dibenz(a,h)anthracene								PCOCs within this				CAMU for benzo(a)pyrene
		Ethylbenzene (2,300);		(0.84 - 12);			Araonia (22.2. 22):					SWMU demonstrated				concentrations >10 mg/kg and TEL
SWMU 19	TEL Burial Area West of Tank 326	Toluene (1,000); Xylenes (8,000)		Indeno(1,2,3-cd)pyrene (18)	X	Х	Arsenic (23.2 - 33); TEL (2.87)		Х	None	None	benzene exceedences between 1 and 100 ug/L.				concentrations >2 mg/kg in soil. MNA for groundwater.
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						SOIL				USEPA TCLP (			GROUNDWAT	ER		
		VOCs	<b>.</b>	svoc	s		Metals	i		Lev		VOCs	SVOCs	Metals		
		(mg/kg	,	(mg/kg			(mg/kg			(mg	<i>.</i> ,	(ug/L)	(ug/L)	(ug/L)		
			Source of Data	Contaminant and	Source	of Data	Contaminant and	Source	of Data	Benzene	Lead	_				
		Contaminant and		Range of			Range of					Contaminant and	Contaminant and	Contaminant and	Presence o	f
		Range of	Pre-	Exceedences of NJDEP		Pre-	Exceedences of NJDEP		Pre-	Range of	Pango of	Range of	Range of	Range of	LNAPL	
SWMU / AOC	Description	Exceedences of NJDEP NRDSCC	CMS CMS	NRDSCC (NRDSCS for Naphthalene)	CMS	CMS	NRDSCC (NRDSCS for Lead)	CMS	CMS	Exceedences	Range of Exceedences	Exceedences of NJDEF GWQS	Exceedences of NJDEP GWQS	Exceedences of NJDEF GWQS	Thickness > 0.01 Feet	
OVVINIO / ACC	Description	HINDOOO		Naphthalene)			Leady					Cirac	Circo	CITAGO	20.01100	Our cenve measures
SWMU 20	TEL Burial Area East of Tank 302	None	x x	None		X	Arsenic (43.7); Total Lead (1,070 - 15,600); TOL (3.2 - 41.2)	X	X	NAN	13.3	Benzene (130)	NAN	Iron - Total (6,350); Iron-Dissolved (7,050); Lead (31)		Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for TCLP lead levels >5 mg/L, and In-Situ Stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice afterwards ISCO Treatment for groundwater.
				Acenapthene (28);												
SWMU 21	TEL Burial Area - Mudflats	Benzene (34); Ethylbenzene (200); Toluene (170); Xylenes (820)	х	Anthracene (39); Benzo(a)anthracene (28); Benzo(a)pyrene (19); Chrysene (40); Naphthalene (160); Phenanthrene (220); Pyrene (85)	X		Total Lead (1,310)	X		None	None	Groundwater modeling o PCOCs within this SWMU demonstrated benzene exceedences between 1 and 100 ug/L.	f			ISCO Treatment for organic contaminants in soil,In-Situ Stabilization for lead in soil, install a non-RCRA cap, and file a deed notic afterwards. MNA for groundwater.
SWMU 22	TEL Burial Area East of Tanks 329	None	x	Benzo(a)pyrene (1.9)		Х	TOL (7.1J)		X	NAN	NAN	Groundwater modeling o PCOCs within this SWMU demonstrated benzene exceedences between 1 and 100 ug/L.	f			Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for TOL concentrations >2 mg/kg in soil. MNA for groundwater.
																NFI granted on 4/1/98. Located in the
SWMU 23	TEL Burial Area West of Tank 116															Amboy Field and not part of the CMS
SWMU 24 SWMU 25	TEL Weathering Area East of Tank 9209 TEL Burial Area Northeast of EYB	Benzene (14 - 29.3)	x x	Benzo(a)pyrene (2.9); Benzo(b)fluoranthene (4.6)		X	Arsenic (55.6); TEL (3.68)		Х	None	NAN	Groundwater modeling o PCOCs within this SWMU demonstrated benzene exceedences between 1 and 100 ug/L.	f			ISCO Treatment for organic contaminants in soil, and Excavation. Ex-Situ Stabilization and Disposal in Tailored CAMU for TEL concentrations >2 mg/kg in soil. MNA for groundwater.  NFA requested on 11/03.
OVVIVIO 25	TEE Buildi Area Northeast of ETB													Aluminum (699);		141 A requested on 11700.
SWMU 26	TEL Burial Area South of EYB	None	X	Benzo(a)pyrene (2)		Х	Arsenic (50.7); TOL (13.1)		Х	NAN	NAN	None	Benzo(a)anthracene (2); Benzo(a)pyrene (2); Benzo(b)fluoranthene (2)	Arsenic (16.8); Iron - Total (214,000); Manganese (12,400); Nickel (206); Sodium (843,000)		Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for TOL concentrations >2 mg/kg in soil. CMS recommendation is NFA for groundwater.
SWMU 27	TEL Weathering Area North of Tank 312 and West of North Field Basin (NFB)	NAN	x	Benzo(a)anthracene (14); Benzo(b)fluoranthene (12); Benzo(a)pyrene (2 - 22); Indeno(1,2,3-cd)pyrene (5.1); Dibenz(a,h)anthracene (4.9)	x		Antimony (15 - 123); Arsenic (22.8 - 63.5); Copper (1,270 - 3,450); Total Lead (1,100 - 3,880); TEL (4.16); Vanadium (703 - 3,740)	X	x	NAN	None	Groundwater modeling o exceedences (see footnote	f PCOCs within this SWMU te 26).	demonstrated no		Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for benzo(a)pyrene concentrations >10 mg/kg, and In-Situ Stabilization for lead in soil and file a deed notice for soils with benzo(a)pyrene concentrations >0.66 mg/kg, as well as for lead contaminated soil afterwards. CMS recommendation is NFA for groundwater.
SWMU 28	Reactor Burial Area	None	X	Benzo(a)pyrene (0.82 - 5.6)		X	None		X	NAN	NAN	Groundwater modeling o	f PCOCs within this SWMU	demonstrated no		Further investigation of phthalic anhydride reactor area soil will be conducted. CMS recommendation is NFA for groundwater.
SVVIVIU ZO	Treadion Bullan Area	INOTIC	<del>                                     </del>	0.0)		^	INOTIC		_^	INAIN	INAIN	eveenemes (see monut	ne 20j.		+	In-Situ Stabilization for lead in soil ar
SWMU 29	Fines Transfer Area	None	X	Benzo(a)pyrene (1 - 8.6)		Х	Total Lead (866 - 3,880); TOL (3)	Х	Х	NAN	None	Benzene (2)	None	Arsenic (11); Lead (8.2)		file a deed notice afterwards. MNA for groundwater.

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						SUIL				USEPA TCLP	Characteristic		GROUNDWA	IER		-
											ste Regulatory					
		VOCs (mg/kg)		SVOC: (mg/kg			Metals (mg/kg				vel a/L)	VOCs (ug/L)	SVOCs (ug/L)	Metals (ug/L)		
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ce of Data			of Data		•,	of Data	Benzene	Lead	(ug/L)	(ug/L)	(ug/L)	1	
		Contaminant and Range of Exceedences of NJDEP	Pre-	Contaminant and Range of Exceedences of NJDEP NRDSCC (NRDSCS for		Pre-	Contaminant and Range of Exceedences of NJDEP NRDSCC (NRDSCS for		Pre-	Range of	Range of			Contaminant and Range of Exceedences of NJDEF		f
SWMU / AOC	Description	NRDSCC CMS	CMS	Naphthalene)	CMS	CMS	Lead)	CMS	CMS	Exceedences	Exceedences	GWQS	GWQS	GWQS	> 0.01 Feet	Corrective Measures
SWMU 30	Short Term Storage Area	None	X	Benzo(a)pyrene (0.82 - 5.6)		X	None		X	NAN	NAN	Groundwater modeling of exceedences (see footnote)		U demonstrated no		File a deed notice for soil. CMS recommendation is NFA for groundwater.
														Iron - Total (8,260 -		In-Situ Stabilization for lead in soil and
														108,000); Iron-Dissolved (8,730 -		file a deed notice afterwards. CMS recommendation is NFA for
SWMU 31	Effluent Treatment Plant Area	None	Х	Benzo(a)pyrene (1.2)		Х	Total Lead (1,880)		Х	NAN	NAN	None	None	76,300)		groundwater.
SWMU 32	PCB Waste Storage Building															NFA requested 8/08.
																NFA conditionally approved on 8/22/03. Located in the West Yard
SWMU33	Temporary Slurry Pit															and not part of the CMS.
SWMU 34	Dumpster and Drainage Area	None	×	Benzo(a)pyrene (4.46 - 31.2)		X	Arsenic (43.4); Beryllium (39.7); Nickel (3,080); Total Lead (1,060 - 22,700); Zinc (4,860)	x	×	NAN	10.4 - 310	1,1- Dichloroethylene (120); Benzene (1 - 43); cis-1,2-Dichloroethylene (110); Tetrachloroethylene (1); Trichloroethylene (820); Vinyl chloride (1 - 26)	None	Aluminum (1,610); Cadmium (182); Iron - Total (1,270 - 110,000); Iron - Dissolved (450 - 105,000); Lead (84); Manganese (219 - 5,980); Nickel (313); Zinc (5,070)		Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for TCLP lead levels > 5mg/L and benzo(a)pyrene concentrations >10 mg/kg in soil, and In-Situ Stabilization for TCLP lead Levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice for soils with benzo(a)pyrene concentrations >0.66 mg/kg, as well as for lead contaminated soil afterwards. MNA for groundwater.
SWMU 35	No. 4 Separator (&AOC 6A)	Benzene (14 - 24) X	X	Benzo(a)anthracene (1.7); Benzo(a)pyrene (0.93 - 5.9); Naphthalene (22 - 31)	X	X	Arsenic (30.3 - 48.3)		X	None	NAN	Benzene (64 - 180)	None	Iron - Total (31,400 - 49,100); Iron-Dissolved (28,200 - 53,200)		ISCO Treatment for organic contaminants in soil. ISCO Treatment for benzene concentrations >100 ug/L and MNA for benzene concentrations between 1 and 100 ug/L in groundwater.
SWMU 36	Oil/Water Separator	None	X	Benzo(a)pyrene (2.5)		X	Arsenic (26.7)		X			Groundwater modeling of exceedences (see footno		U demonstrated no		Containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil. CMS recommendation is NFA for groundwater.
SWMU 37	West Yard (WY) Sludge Pond															NFA conditionally approved on 8/22/03. Located in the West Yard and not part of the CMS.
SWMU 38	North Field Slop Pond	None	X	Benzo(a)pyrene (1.2 - 18)	Х	X	None		Х	NAN	NAN					Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for benzo(a)pyrene concentrations >10 mg/kg in soil and file a deed notice for soils with benzo(a)pyrene concentrations >0.66 mg/kg. NFA for groundwater granted on 1/21/05.
SWMU 39	Unnamed NF Pond	Benzene (210); Isopropylbenzene (600); Xylenes (740)	x	Benzo(a)pyrene (5.4 - 7.5)		×	Arsenic (22.8); Total Lead (1,430)	X	x	NAN	None	Groundwater modeling of exceedences (see footnometers)		U demonstrated no		ISCO Treatment for organic contaminants in soil, containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil, and In-Situ Stabilization for lead in soil and file a deed notice afterwards. CMS recommendation is NFA for groundwater.

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							SOIL				USEPA TCLP	Characteristic		GROUNDWA	IER .		<del> </del>
											Hazardous Was						
		VOCs (mg/kg)	`		SVOCs (mg/kg			Metals (mg/kg			Lev (mo		VOCs (ug/L)	SVOCs (ug/L)	Metals (ug/L)		
		(g/g/	Source	of Data	, i		e of Data	, •		of Data	Benzene	Lead	("9,"-/	(~9/-/	("g/-/		
		Contaminant and			Contaminant and			Contaminant and					Contouringer on d	Contaminant and	Contaminant and	D=====================================	
		Range of			Range of Exceedences of NJDEP			Range of Exceedences of NJDEP					Contaminant and Range of	Range of	Range of	Presence of LNAPL	
		Exceedences of NJDEP	0140	Pre-	NRDSCC (NRDSCS for		Pre-	NRDSCC (NRDSCS for	0140	Pre- CMS	Range of	Range of		Exceedences of NJDE	P Exceedences of NJDEP		
SWMU / AOC	Description	NRDSCC	CMS	CMS	Naphthalene)	CMS	CMS	Lead)	CMS	CIVIS	Exceedences	Exceedences	GWQS	GWQS	GWQS Arsenic (15.2 - 16.6);	> 0.01 Feet	Corrective Measures
		Benzene (87.6 - 5,500);												Bis(2-ethylhexyl)pthalate	Iron - Total (6,920);		ISCO Treatment for Soil. MNA for
SWMU 40	Old Pond	Xylenes (1,600 - 2,200)	Х	Х	Benzo(a)pyrene (12.7)		Х	Copper (796)		Х	17 - 33	NAN	Benzene (19)	(BEHP) (12)	Iron - Dissolved (4,990)		groundwater.
													Groundwater modeling of				ISCO Treatment for organic
					Benzo(a)anthracene			Arsenic (76.8); Copper (607);					PCOCs within this SWMU demonstrated				contaminants in soil, and In-Situ Stabilization for lead in soil and file a
					(17); Benzo(a)pyrene (0.74 -			Total Lead (1,880);					benzene exceedences				deed notice afterwards. MNA for
SWMU 41	Drying Area	Benzene (14 - 29.3)	Х	Х	9.6)		Х	Zinc (2,060)		Х	None	NAN	between 1 and 100 ug/L.				groundwater.
																	ISCO Treatment for organic
																	contaminants in soil, and In-Situ
													Groundwater modeling of PCOCs within this		Groundwater modeling of PCOCs within this		Stabilization for lead in soil and file a deed notice afterwards. ISCO
													SWMU demonstrated		SWMU demonstrated		Treatment for benzene concentrations
													benzene exceedences		lead exceedences		>100 ug/L, and MNA for benzene
SWMU 42	East Yard Crude Slab	Benzene (16)	×	Х	Benzo(a)pyrene (1.6)		×	Total Lead (977)		×	None	NAN	between 1 and 100 ug/L, and >100 ug/L.		between 5 and 50 ug/L, and >50 ug/L.		concentrations between 1 and 100 ug/L in groundwater.
	Last raid Grade Grad	Demission (10)			201120(0)/2910110 (110)			10101 2000 (011)			110.10		and Froo agree		and roo agree		ag z m groundwaten
					Acenaphthene (4.4 - 25);												
					Anthracene (3.4 - 27);												
					Benzo(a)anthracene (4 -												
					29); Benzo(a)pyrene (4 - 61);												
					Chrysene (3.5 - 40);												
					Naphthalene (23 - 270); o-Cresol (25);												ISCO Treatment for organic contaminants in soil, In-Situ
		Benzene (17 - 34);			m&p - Cresol (20);												Stabilization for lead in soil, install a
		Ethylbenzene (23 - 200);			Phenanthrene (7.3 -										Iron - Total (10,800 -		non-RCRA cap, and file a deed notice
SWMU 43	Mud Flats	Toluene (15 - 170); Xylenes (40 - 1,200)	X		180); Pyrene (8.2 - 67)	Х		Total Lead (941 - 3,010)	X		0.57 - 0.88	70.1	Benzene (2 - 48)	NAN	11,200); Iron-Dissolved (7,860)	Х	afterwards. Continue LRMs, and MNA for groundwater.
													, ,				File a deed notice for soil. NFA for
SWMU 44	Unnamed Main Yard Pond	None		Х	Benzo(a)pyrene (1 - 5.1)		Х	None		Х	NAN	NAN	None	NAN	NAN		groundwater granted on 1/21/05.  Currently monitoring closure wells. In
																	the process of filing deed notice with
SWMU 45	Surface Impoundment South of EYB																conditional NFA.  Located in the NFE and not part of
SWMU 46	North Field Extension(NFE) Lagoon 1																the CMS.
C)A/A41.1.47	NEE Lanca 2																Located in the NFE and not part of
SVVIVIU 47	NFE Lagoon 2																the CMS. Located in the NFE and not part of
SWMU 48	NFE Lagoon 3																the CMS.
SWMU 49	NFE Lagoon 4																Located in the NFE and not part of the CMS.
	-																RIR accepted. Located in the NFE
	Former NFE Debris Pile No.1 Oily Soil Pad																and not part of the CMS.  NFI requested 4/08.
SVVIVIU 51	Olly 3011 Fau						1						+	<u>l</u>			NFI requested 4/08. NFI granted on 4/1/98. NFA for soil
																	requested on 11/03. CMS
SWMII 52	TEL Burial Area Southwest of Tank 13												Groundwater modeling of exceedences (see footno		U demonstrated no		recommendation is NFA for groundwater.
SWMU 52	13			l	1	<u> </u>	1	1	l	<u> </u>			exceedences (see rootno	te ∠0).			groundwater.

	Т						SOIL							GROUNDWA	TED		T
							SUIL				USEPA TCLP	Characteristic		GROUNDWA	IER		1
											Hazardous Wa	ste Regulatory					
		VOCs			SVOC			Metals			Le		VOCs	SVOCs	Metals		
		(mg/kg)	) Source	of Data	(mg/kg		of Data	(mg/kg	Source	of Data	Benzene	g/L) Lead	(ug/L)	(ug/L)	(ug/L)	-	
SWMU / AOC	Description	Contaminant and Range of Exceedences of NJDEP NRDSCC	CMS	Pre-	Contaminant and Range of Exceedences of NJDEP NRDSCC (NRDSCS for Naphthalene)	CMS	Pre-	Contaminant and Range of Exceedences of NJDEP NRDSCC (NRDSCS for		Pre-	Range of Exceedences	Range of Exceedences	Contaminant and Range of Exceedences of NJDEP GWQS	Contaminant and Range of Exceedences of NJDEF GWQS	Contaminant and Range of Exceedences of NJDEP GWQS	Presence of LNAPL Thickness > 0.01 Feet	Corrective Measures
																	File a deed notice for soil. CMS
SWMU 53	Potential Discharge - Tank Basin 312	None		X	Benzo(a)pyrene (1.1)		X	None		Х	NAN	NAN	None	NAN	Iron - Total (26,500); Iron-Dissolved (23,500)		recommendation is NFA for groundwater.
OVVIVIO 33	1 oterna biseriarge Tarik basii 312	TVOTIC			Benzo(a)pyrene (1.1)			None			INAIN	IVAIN	INOTIC	147-114	11011 213301704 (23,300)		NFA conditionally approved. Located
																	in the West Yard and not part of the
SWMU 54	No.2 Amine Plant Molten Sulfur Pit																CMS. NFA conditionally approved. Located
																	in the West Yard and not part of the
SWMU 55	No.2 Amine Plant Holding Basin																CMS.
	N 00 K D 11 K																NFA conditionally approved. Located
	No.3 Sulfur Recovery Unit Neutralization Sump																in the West Yard and not part of the CMS.
3VVIVIO 30	Neutralization oump																NFA conditionally approved. Located
																	in the West Yard and not part of the
SWMU 57	No.3 Sulfur Recovery Unit Acid Sump																CMS. NFA conditionally approved. Located
	No.3 Sulfur Recovery Unit																in the West Yard and not part of the
	Neutralization Sump																CMS.
																	NFA conditionally approved. Located
SWMU 59	No.4 Sulfur Recovery Unit Sulfur Pit																in the West Yard and not part of the CMS.
244MO 28	No.4 Sullar Recovery Offic Sullar Pic																NFA conditionally approved. Located
																	in the West Yard and not part of the
SWMU 60	No.4 Sulfur Recovery Unit Acid Sump																CMS.
	No.2 Amine Plant Wash Water Collection Sump																NFA conditionally approved. Located in the West Yard and not part of the CMS.
	·																NFA conditionally approved. Located
	No.2 Amine Plant Slurry Collection																in the West Yard and not part of the
	Sump Potential Discharge - Tank 1																CMS. NFA requested on 11/03.
	Potential Discharge - Tank 3																NFA requested on 11/03.
AOC 3	Potential Discharge - Tank 4																NFA requested on 11/03.
AOC 4	Potential Discharge - Tank 106																NFA requested on 10/03. Located in the Amboy Field and not part of the CMS.
	<u> </u>																In-Situ Stabilization for lead in soil and
	Detroloure Cubator No				Danna(a)num: :: /5 4								0	DOOD- with the ACC	dans an atmata d		file a deed notice afterwards. CMS
	Petroleum Substance Near Underground Storage Tank E3	None		Х	Benzo(a)pyrene (5.4 - 7.5)		Y	Total Lead (1,430)		Х	NAN	NAN	Groundwater modeling of exceedences (see footnot		demonstrated no		recommendation is NFA for groundwater.
7000	Onderground Glorage Tank 25	None			1.5)			10tai Ecau (1,400)			INAIN	IVAIN	CXCCCCCTICCS (SCC TOOLITO)	C 20).			File a deed notice for soil. CMS
					Benzo(a)pyrene (1.4 -			Arsenic (45.5);					Groundwater modeling of		demonstrated no		recommendation is NFA for
AOC 6A	Oily Material (B26 & B34)	None		Х	9.5)		Х	Thallium (3.4)		Х	NAN	NAN	exceedences (see footnot	e 26).			groundwater.
																	Capping of arsenic soil contamination
																	and file a deed notice afterwards.
100	0.1.14												Groundwater modeling of		demonstrated no		CMS recommendation is NFA for
AOC 6B	Oily Material (B29, B30 & B31)						1						exceedences (see footnot	e 26).			groundwater. File a deed notice for soil. CMS
													Groundwater modeling of	PCOCs within this AOC of	demonstrated no		recommendation is NFA for
AOC 6C	Oily Material (B32 & B33)	None		Χ	None		Х	Arsenic (26.3)		Х	NAN	NAN	exceedences (see footnot	e 26).			groundwater.
1007	Tama Makadal at MOV 10	0-1											Groundwater modeling of		demonstrated no		CMS recommendation is NFA for soil
AOC 7	Tarry Material at MW-13	Soil modeling of PCOCs w	vitnin this A	400 dem	nonstrated no exceedences								exceedences (see footnot Groundwater modeling of	e ∠o).	1		and groundwater.
													PCOCs within this AOC				ISCO Treatment for soil. ISCO
		Soil modeling of PCOCs											demonstrated benzene				Treatment for benzene concentrations
		within this AOC											exceedences between 1				>100 ug/L, and MNA for benzene
	Oily & Tarry Material at B27 & B28	demonstrated benzene exceedences >13 mg/kg.	l	Х									and 100 ug/L, and >100 ug/L.			1	concentrations between 1 and 100 ug/L in groundwater.

							SOIL						1	GROUNDWA	TED		T
							SUIL				USEPA TCLP	Characteristic		GROUNDWA	NIEK		
												ste Regulatory					
		VOCs			SVOCs			Metals			Le		VOCs	SVOCs	Metals		
		(mg/kg)	Source of	-f Data	(mg/kg		of Data	(mg/kg		e of Data	Benzene	g/L) Lead	(ug/L)	(ug/L)	(ug/L)		
		-	Source C	or Data	Contaminant and	Source	or Data	Contaminant and	Source	or Data	Benzene	Lead	+				
		Contaminant and			Range of			Range of					Contaminant and	Contaminant and	Contaminant and	Presence of	
		Range of			Exceedences of NJDEP			Exceedences of NJDEP					Range of	Range of	Range of	LNAPL	
0,4,4,4,4,0,0	5	Exceedences of NJDEP	CMS	Pre- CMS	NRDSCC (NRDSCS for	CMS	Pre- CMS	NRDSCC (NRDSCS for	CMS	Pre- CMS	Range of Exceedences	Range of Exceedences			P Exceedences of NJDEP	Thickness	
SWMU / AOC	Description	NRDSCC	CIVIS	CIVIS	Naphthalene)	CIVIS	CIVIS	Lead)	CIVIS	CIVIS	Exceedences	Exceedences	GWQS	GWQS	GWQS	> 0.01 Feet	Corrective Measures
															Iron - Total (3,470 -		CMS recommendation is NFA for soil.
															9,480);		ISCO Treatment for benzene
															Iron-Dissolved (2,760 -		concentrations >100 ug/L, and MNA
AOC 9A	Contamination at NF-10												Benzene (6 - 490); Xylenes (2,000)	None	8,820); Lead (31)		for benzene concentrations between 1 and 100 ug/L in groundwater.
AUC 9A	Contamination at NF-10												Ayleries (2,000)	None	Iron - Total (45,600);		NFA for soil requested on 11/03. MNA
AOC 9B	Contamination at NF-11												Benzene (85)	None	Iron-Dissolved (42,200)		for groundwater.
																	File a deed notice for soil. CMS
100.10	Otaina d Oail & Oassal Na an IAE Taul	Mana			Benzo(a)pyrene (4.8 -			Name		×	NAN	NIANI	News	Name	Mana		recommendation is NFA for
AOC 10	Stained Soil & Gravel Near IAF Tank Potential Debris Pile Adjacent to	None		Х	4.9)		Х	None		X	NAN	NAN	None	None	None		groundwater. RIR accepted. Located in the NFE
AOC 11	Former Building in NFE																and not part of the CMS.
	, , , , , , , , , , , , , , , , , , ,																RIR accepted. Located in the NFE
AOC 12	Potential NFE Lagoon 5																and not part of the CMS.
														DCCCs within this ACC	da		File a deed notice for soil. CMS recommendation is NFA for
AOC 13	Oily Fill Material (B-11)	None		X	None		X	Arsenic (31)		x	NAN	NAN	Groundwater modeling of exceedences (see footnot		demonstrated no		groundwater.
7.00 10	ony i m material (5 i i)	110.10			110110		- ^ -	7 11 001110 (0.1)			10.11		0,000,000 (000 100,000				g. oa. iawato.
															Aluminum (699);		ISCO Treatment for organic
													Niena Additionalis		Arsenic (16.8);		contaminants in soil, containment
													None. Additionally, groundwater modeling of		Iron - Total (30,300 - 214,000);		consisting of a cap with filing a deed notice afterwards for arsenic
													PCOCs within this AOC		Iron - Dissolved (31,300);		concentrations >20 mg/kg in surface
													demonstrated benzene	Benzo(a)anthracene (2)			soil, and In-Situ Stabilization for lead
		_						Arsenic (22.3 - 83.2);						Benzo(a)pyrene (2);	Nickel (206);		in soil and file a deed notice
AOC 14	GWQAP Oily Fill Area III	Benzene (15.5 - 36)		Х	Benzo(a)pyrene (0.91)		Х	Total Lead (901)		X	NAN	NAN	and 100 ug/L. Groundwater modeling of	Benzo(b)fluoranthene (2	2)   Sodium (843,000)		afterwards. MNA for groundwater.
													PCOCs within this AOC				ISCO Treatment for soil. ISCO
													demonstrated benzene				Treatment for benzene concentrations
		Benzene (68);											exceedences between 1				>100 ug/L, and MNA for benzene
100.15	0.00	Toluene 91,200);	.,	.,	2,4 - Dinitrotoluene (20);	.,	.,		.,	.,			and 100 ug/L, and >100				concentrations between 1 and 100
AOC 15	Oil Release at Buckeye Pipe Manifold	Xyienes (2,600)	Х	Х	Naphthalene (22)	X	Х	None	Х	Х	NAN	NAN	ug/L.				ug/L in groundwater.
																	ISCO Treatment for organic
																	contaminants in soil with
																	benzo(a)pyrene concentrations <10
																	mg/kg, and Excavation, Ex-Situ
ĺ																	Stabilization and Disposal in Tailored CAMU for organic contaminants in soil
																	with benzo(a)pyrene concentrations
																	>10 mg/kg. In-Situ Stabilization for
																	lead in soil and file a deed notice
					Benzo(a)pyrene (0.91 - 27);			Arsenic (28 - 55.1);							Iron - Total (793 -		afterwards. ISCO Treatment for
					Dibenz(a,h)anthracene			Arsenic (28 - 55.1); Thallium (2.09 - 4.4);							26,000);		benzene concentrations >100 ug/L, and MNA for benzene concentrations
		Benzene (14 - 5,500);			(0.80);			Total Lead (1,330 -							Iron-Dissolved (548 -		between 1 and 100 ug/L in
MY - AOC 16	Oily Water Sewer System - Main Yard	Xylenes (2,200)	Х		Naphthalene (23 - 65)	Χ	Х	1,640)	Х	Х	1.6 - 33	NAN	Benzene (1 - 3,400)	2,4-Dimethylphenol (480			groundwater.

				T	SOIL				LISEPA TOLP	Characteristic		GROUNDWA	TER		-
										ste Regulatory					
		VOCs		svoc		Metals			Le		VOCs	SVOCs	Metals		
		(mg/kg)	ce of Data	(mg/kg	3) Source of Data	(mg/kg		of Data	(mo	g/L) Lead	(ug/L)	(ug/L)	(ug/L)	1	
SWMU / AOC	Description	Contaminant and Range of Exceedences of NJDEP NRDSCC CM:	Pre-	Contaminant and Range of Exceedences of NJDEP NRDSCC (NRDSCS for Naphthalene)		Contaminant and Range of Exceedences of NJDEP NRDSCC (NRDSCS for Lead)	CMS	Pre- CMS	Range of Exceedences	Range of Exceedences	Contaminant and Range of Exceedences of NJDEP GWQS	Contaminant and Range of Exceedences of NJDEI GWQS	Contaminant and Range of P Exceedences of NJDEP GWQS	Presence of LNAPL Thickness > 0.01 Feet	
											Benzene (3 - 9,500); Ethylbenzene (870 - 1,200); Methyl ethyl ketone (880); Toluene (10,000 -	Benzo(a)anthracene (3); Benzo(a)pyrene (3); Benzo(b)fluoranthene	Aluminum (622 - 3,170); Antimony (12.8); Arsenic (73 - 360); Iron - Total (322 - 80,600); Iron - Dissolved (4,800 - 84,400); Lead (10.2 - 351); Manganese (463 - 2,120);		ISCO Treatment for organic contaminants in soil with benzo(a)pyrene concentrations <10 mg/kg, and Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for organic contaminants in soil with benzo(a)pyrene concentrations >10 mg/kg and TCLP lead levels > 5mg/L in soil. Containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil. In-Situ Stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice afterwards. ISCO Treatment for benzene concentrations >100 ug/L, and MNA
		Benzene (16 - 170);		Benzo(a)pyrene (0.69 -		Arsenic (20.7- 69.9);					12,000);	(3);	2,120), Sodium (74,400 -		for benzene concentrations between
EY - AOC 16	Oily Water Sewer System - East Yard	Xylenes (1,200) X	Х	38)	X X	Total Lead (831 - 10,700)	Х	Х	None	8.61 - 13.6	Xylenes (6,600 - 7,800)	Benzo(k)fluoranthene (1	) 392,000)		1 and 100 ug/L in groundwater.
	Oily Water Sewer System - Central			Benzo(a)pyrene (3.8 -								Benzo(a)anthracene (10); Benzo(a)pyrene (7); Benzo(b)fluoranthene (3); Bis(2-ethylhexyl)phthalate (BEHP) (20);	Iron - Total (56,900); Manganese (7,880);		Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for organic contaminants in soil with benzo(a)pyrene concentrations >10 mg/kg and file a deed notice for soils with benzo(a)pyrene concentrations >0.66 mg/kg afterwards. ISCO Treatment for benzene concentrations >100 ug/L, and MNA for benzene concentrations between 1 and 100
CY - AOC 16	Yard	None	X	17)	X	None		Х	NAN	NAN	Benzene (38 - 270)	Chrysene (20)	Sodium (219,000)		ug/L in groundwater. File a deed notice for soil. CMS
AOC 17	Potential Discharge - Tank 20	None	X	Benzo(a)pyrene (0.91)	X	None		Х	NAN	NAN	Groundwater modeling of exceedences (see footno	te 26).			recommendation is NFA for groundwater.
AOC 18	Potential Discharge - Tank 2	Soil modeling of PCOCs within the	is AOC den	nonstrated no exceedences							Groundwater modeling of exceedences (see footno		demonstrated no		CMS recommendation is NFA for soil and groundwater.
AOC 19	Main Yard Pipeway	None X	X	Benzo(a)pyrene (1.3 - 6)	X	None		Х	NAN	NAN	Groundwater modeling of exceedences (see footno	PCOCs within this AOC	demonstrated no		File a deed notice for soil. CMS recommendation is NFA for groundwater.  NFA requested on 4/05. Located in the Amboy Field and not part of the
AOC 20	Aboveground Product Pipe Manifold														CMS.
AOC 21	Maurer Road Excavation / SS Loading Rack										Groundwater modeling of exceedences (see footno		demonstrated no		CMS recommendation is NFA for soil and groundwater.
70021											Benzene (2 -1,100); Ehtylbenzene (2,500);		Iron - Total (32,800); Iron - Dissolved (35,400);		ISCO Treatment for organic contaminants in soil. Excavation, Exsitu Stabilization and Disposal in Tailored CAMU for TCLP lead levels > 5mg/L, and In-situ Stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice afterwards. ISCO Treatment for benzene concentrations >100 ug/L, and MNA for benzene
AOC 22	Shops Building Groundwater Contamination	Benzene (33); Xylenes (2,300) X		Benzo(a)pyrene (1.4 - 4.72)	x x	Total Lead (1,060 - 22,700)	Х	X	NAN	10.4 - 310	Toluene (2,200); Xylenes (15,000)	Naphthalene (500)	Manganese (1,590); Sodium (70,700)		concentrations between 1 and 100 ug/L in groundwater.

		1															
							SOIL				USEPA TOLP	Characteristic		GROUNDWA	ATER		-
												ste Regulatory					
		VOCs			SVOCs			Metals				vel	VOCs	SVOCs	Metals		
		(mg/kg)			(mg/kg			(mg/kg				g/L)	(ug/L)	(ug/L)	(ug/L)		
			Source	of Data	Contaminant and	Source	of Data	Contaminant and	Source	e of Data	Benzene	Lead	_				
		Contaminant and			Range of			Range of					Contaminant and	Contaminant and	Contaminant and	Presence of	,
		Range of			Exceedences of NJDEP			Exceedences of NJDEP					Range of	Range of	Range of	LNAPL	
		Exceedences of NJDEP		Pre-	NRDSCC (NRDSCS for		Pre-			Pre-	Range of	Range of			P Exceedences of NJDEP	Thickness	
SWMU / AOC	Description	NRDSCC	CMS	CMS	Naphthalene)	CMS	CMS	Lead)	CMS	CMS	Exceedences	Exceedences	GWQS	GWQS	GWQS	> 0.01 Feet	Corrective Measures
AOC 23	Tank Basin 327	None	x	X	None		X	Arsenic (25.9 - 117); Total Lead (981 - 8,450); TOL (91.9)	X	X	None	7.58	Benzene (28 - 350)	NAN	Iron - Total (13,100 - 29,000); Iron-Dissolved (11,800 - 28,000); Lead (7.2)		Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for TCLP lead Levels > 5mg/L, and In-Situ Stabilization for TCLP lead Levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice afterwards. ISCO Treatment for benzene concentrations >100 ug/L, and MNA for benzene concentrations between 1 and 100 ug/L in groundwater.
AOC 24	Release at Fire Hydrant Northwest of Tank 4																1/21/05. Postponed NFA request for soil until SRFI comment No.28 is resolved.
AOC 25	Release at Former Cat Cracker	Soil modeling of PCOCs wit	thin this <i>F</i>	AOC dem	nonstrated no exceedences	3. 			ı	T			Groundwater modeling of PCOCs within this AOC demonstrated benzene exceedences between 1 and 100 ug/L.			X	CMS recommendation is NFA for soil. Continue LRMs, and MNA for groundwater. IISCO Treatment for soil. CMS
AOC 26	East Yard Bunker Slab	Benzene (19)		Х	Benzo(a)pyrene (1)		Х	Arsenic (31.1 - 60.3)		Х	NAN	NAN	None	NAN	Iron - Total (7,470); Iron - Dissolved (6,130)		recommendation is NFA for groundwater.
AOC 27	Tank 777 Pipeway	None		Х	None		Х	Arsenic (23.9)		Х	NAN	NAN	Groundwater modeling of exceedences (see footnomerces)		demonstrated no		File a deed notice for soil. CMS recommendation is NFA for groundwater.
AOC 28	Asphalt Plant Tanks	None		Х	Benzo(a)pyrene (0.75)		Х	None		Х	NAN	NAN					File a deed notice for soil. NFA granted for groundwater on 1/21/05.
AOC 29	5 Berth Area Tank 27 Pipeway	None Soil modeling of PCOCs wit	thin this A	X AOC dem	Benzo(a)anthracene (18); Benzo(a)pyrene (1.7 - 100); Benzo(b)fluoranthene (6.2); Dibenz(a,h)anthracene (0.86)	5.	X	Total Lead (2,100). Additionally, soil modeling of PCOCs within this AOC demonstrated arsenic exceedences >20 mg/kg.		х	NAN	NAN	None	None	Iron - Total (6,440); Iron - Dissolved (6,370)		Revetment, asphalt collection, and operation, maintenance and monitoring of groundwater and surface water, and file a deed notice afterwards.  CMS recommendation is NFA for soil. NFA granted for groundwater on 1/21/05.
AOC 31	Tank 772 Pump Pad	Benzene (34 - 74)		X	None		X	Arsenic (39.8 - 58.6); Total Lead (1,280)		X	NAN	NAN	Benzene (9,200)	NAN	Iron - Total (39,200); Iron - Dissolved (27,400)		ISCO Treatment for organic contaminants in soil. Containment consisting of a cap with filing a deed notice afterwards for arsenic concentrations >20 mg/kg in surface soil. In-Situ Stabilization for lead in soi and file a deed notice afterwards. ISCO Treatment for groundwater.

						S	OIL							GROUNDWAT	ER		
											USEPA TCLP	Characteristic					
											Hazardous Was	ste Regulatory					
		VOCs			SVOCs			Metals			Lev		VOCs	SVOCs	Metals		
		(mg/kg			(mg/kg)			(mg/kg)				g/L)	(ug/L)	(ug/L)	(ug/L)		
			Source	of Data		Source of	Data		Source of	Data	Benzene	Lead	_				
					Contaminant and			Contaminant and									
		Contaminant and			Range of			Range of						Contaminant and	Contaminant and	Presence of	
		Range of		Pre-	Exceedences of NJDEP		Dro	Exceedences of NJDEP		Pre-	Range of	Range of	Range of	Range of	Range of	LNAPL	
SWMU / AOC	Description	Exceedences of NJDEP NRDSCC	смѕ	CMS	NRDSCC (NRDSCS for Naphthalene)		Pre- CMS	NRDSCC (NRDSCS for Lead)		CMS	Exceedences	Exceedences	Exceedences of NJDEP Exc	GWQS	GWQS	Thickness > 0.01 Feet	Corrective Measures
SWIND / AUC	Description	NKDSCC	ONIO	Oilio	Naphthalene)	Oilio	JINO	Leau)	OINIO (	OWIO	Exoccuciices	Execution	Groundwater modeling of PC			> 0.01 Feet	CMS recommendation is NFA for so
AOC 32	Tank 16 Basin	Soil modeling of PCOCs v	within this	AOC den	nonstrated no exceedences.								exceedences (see footnote 26		emonstrated no		and groundwater.
								Nickel (1,550);					,	,			
								Total Lead (2,210);									In-situ Stabilization for soil and file a
					Benzo(a)pyrene (1.01 -			Copper (2,890);							Iron - Total (6,880);		deed notice afterwards. MNA for
AOC 33	Tank 314 Basin	None		Х	4.92)		Χ	Zinc (10,500)		Х	NAN	NAN	Benzene (92) NA	N.N.	Iron-Dissolved (5,460)		groundwater.
														00			File a deed notice for soil. CMS
100.24	Tank 315 Basin	Nana		V	Ness		V	A ==== = (20, C)		v	NANI	NIANI	Groundwater modeling of PC		emonstrated no		recommendation is NFA for groundwater.
AOC 34 AOC 35	Tank 771 Basin	None None			None None			Arsenic (29.6) Arsenic (21.3 - 23.7)		X	NAN NAN	NAN NAN	exceedences (see footnote 26	6).			NFA granted on 1/21/05.
AOC 33	Talk II Dasiii	None			Notic		^	Al 36110 (21.3 - 23.1)		^	INAIN	INAIN					N A granted on 1/21/03.
													1,1,1-Trichloroethane (49				
													- 1,500);				
													1,1,2-Trichloroethane (6);		Aluminum (374 - 843);		
													1,1-Dichloroethane (53 -		Arsenic (10.3 22.5);		
													760);		Iron - Total (849 -		
													1,1-Dichloroethylene (3 -		205,000);		
													1,200);		Iron - Dissolved (411 -		
													Chloroethane (180);		194,000);		
													Tetrachloroethylene (2 -		Manganese (919); Nickel (112);		
													Trichloroethylene (5 -		Sodium (56,100 -		
	Chlorinated Hydrocarbons in												1,200);		281,000);		CMS recommendation is NFA for
AOC 36	Groundwater	Soil modeling of PCOCs v	within this	AOC dem	nonstrated no exceedences.								Vinyl chloride (2 - 120) No	ne	Thallium (15.1)		soils. MNA for groundwater.
		J													. ,		ISCO Treatment for organic
																	contaminants in soil, and In-Situ
																	Stabilization for lead in soil and file a
																	deed notice afterwards. The present
																	of COCs in groundwater needs to be
								T. III. (0.4.0.5)						00			confirmed or refuted through
AOC 27	East Yard Gasoline Filters	Panzana (10)		V	Nama		V	Thallium (2.4 - 2.5); Total Lead (1,910)	V	V	NIANI	NIANI	Groundwater modeling of PC		emonstrated no		installation of a permanent monitoring well(s).
AOC 37	Last Tatu Gasonine Fillers	Benzene (19)	+	Х	None		Х	10tal Leau (1,910)	Х	Х	NAN	NAN	exceedences (see footnote 26	uj.			ISCO Treatment for organic
																	contaminants in soil. Containment
																	consisting of a cap with filing a deed
																	notice afterwards for arsenic
																	concentrations >20 mg/kg in surface
	Barge Loading Manifold at Tank												Groundwater modeling of PC	OCs within this AOC de	emonstrated no		soil. CMS recommendation is NFA for
AOC 38	761and G180/181 Naphtha Pumps	Benzene (78)	X	Х	Benzo(a)pyrene (1.6)		Χ	Arsenic (70.4)		Х	NAN	NAN	exceedences (see footnote 26	6).			groundwater.
																	ISCO Treatment for soil. CMS
	East Yard Pump House and PRC				[								Groundwater modeling of PC		emonstrated no		recommendation is NFA for
AOC 39	Loading Rack	Benzene (36)	1	Х	None		Χ	Arsenic (22.1)		Χ	NAN	NAN	exceedences (see footnote 26	6).			groundwater.
													Charles divinted as a delice of DO	00- within this A00 !			File a deed notice for soil. CMS
		None		V	Benzo(a)pyrene (0.94)		~	Aroonio (25.2)		_	NAN	NIANI	Groundwater modeling of PC		emonstrated no		recommendation is NFA for
100.40		None	1	X	Benzo(a)pyrene (0.94)		Х	Arsenic (35.3)		Χ	NAN	NAN	exceedences (see footnote 26	<b>ს).</b>	Γ		groundwater.
AOC 40	Tank Basin 22	1				1		l l									
AOC 40	Tank Basin 22																ISCO Treatment for benzene in soil
AOC 40	Tank Basin 22												Benzene (24,000):				ISCO Treatment for benzene in soil, and In-situ Stabilization for lead in so
AOC 40	Tank Basin 22							Total Lead (2,320);					Benzene (24,000); Toluene (1,400);		Iron - Total (16,300); Iron-Dissolved (14,700)		ISCO Treatment for benzene in soil, and In-situ Stabilization for lead in so and file a deed notice afterwards. ISCO Treatment for groundwater.

					SOIL						<u> </u>	GROUNDWA	TED		
					SOIL					Characteristic		GROUNDWA	NIER .		-
		VOCs		svoc	S	Metals				ste Regulatory vel	VOCs	SVOCs	Metals		
		(mg/kg)	of Data	(mg/kg	Source of Data	(mg/kg		of Data	Benzene	g/L) Lead	(ug/L)	(ug/L)	(ug/L)	1	
			OI Data	Contaminant and	Source of Data	Contaminant and	Source	oi Data	Delizerie	Leau					
		Contaminant and Range of		Range of Exceedences of NJDEP		Range of Exceedences of NJDEP					Contaminant and Range of	Contaminant and Range of	Contaminant and Range of	Presence of LNAPL	f
		Exceedences of NJDEP	Pre-	NRDSCC (NRDSCS for	Pre-	NRDSCC (NRDSCS for		Pre-	Range of	Range of	Exceedences of NJDEF	Exceedences of NJDE	P Exceedences of NJDEP	Thickness	
SWMU / AOC	Description	NRDSCC CMS	CMS	Naphthalene)	CMS CMS	Lead)	CMS	CMS	Exceedences	Exceedences	GWQS Groundwater modeling of	GWQS f PCOCs within this AOC	GWQS demonstrated no	> 0.01 Feet	Corrective Measures CMS recommendation is NFA for soil
AOC 42	Tank Basin 310	Soil modeling of PCOCs within this	AOC den	nonstrated no exceedences				,			exceedences (see footno				and groundwater.
													Iron - Total (13,400); Iron-Dissolved (23,000);		File a deed notice for soil. CMS recommendation is NFA for
AOC 43	Tank Basin 311	None	Х	Benzo(a)pyrene (0.7)	Х	None		Х	NAN	NAN	None	None	Manganese (2,440)		groundwater.
AOC 44	Tank Basin 313	None	X	Benzo(a)pyrene (6.6); Benzo(a)anthracene (22); Benzo(b)fluoranthene (11); Benzo(k)fluoranthene (4.5)	X	Arsenic (29)		X	NAN	NAN	Benzene (200). Additionally, groundwate modeling of PCOCs within this AOC demonstrated benzene exceedences between 1 and 100 ug/L.	NAN	Iron - Total (2,750 - 42,000); Iron-Dissolved (1,550 - 31,300)	x	File a deed notice for soil. Continue LRMs. ISCO Treatment for benzene concentrations >100 ug/L, and MNA for benzene concentrations between 1 and 100 ug/L in groundwater.
AOC 45	Tank Basin 748	None	X	Benzo(a)pyrene (1.7)	X	Arsenic (22.2 - 139); Copper (1,080)		X	NAN	NAN	Groundwater modeling o exceedences (see footnoted	f PCOCs within this AOC ote 26).	demonstrated no		Capping of arsenic soil contamination and file a deed notice afterwards. CMS recommendation is NFA for groundwater.
AOC 46	Tank Basins 749 and 780	Benzene (31) X	X	Benzo(a)pyrene (0.74 - 3.2)	X	Arsenic (26.2 - 431); Total Lead (1,630 - 4,680)		X	NAN	8.95	Groundwater modeling o exceedences (see footnot	f PCOCs within this AOC te 26).	demonstrated no		ISCO Treatment for organic contaminants in soil. Excavation, Ex-Situ Stabilization and Disposal in Tailored CAMU for TCLP lead levels > 5mg/L, and In-situ Stabilization for TCLP lead levels <5 mg/L and lead levels >800 mg/kg in soil and file a deed notice afterwards. Capping of arsenic soil contamination and file a deed notice afterwards. CMS recommendation is NFA for groundwater.
AOC 47	No. 4 Crude Unit	None	X	Benzo(a)pyrene (1.1 - 2); Benzo(a)anthracene (5.2)		Arsenic (48.2)		×	NAN	NAN	Groundwater modeling o exceedences (see footnote)	f PCOCs within this AOC ote 26).	demonstrated no		File a deed notice for soil. CMS recommendation is NFA for groundwater.
AOC 48	Isomax Process Plant	None	х	Benzo(a)pyrene (1 - 5.1); Benzo(a)anthracene (12); Dibenz(a,h)anthracene (4.1)		None		Х	NAN	NAN	Benzene (6)	NAN	NAN		File a deed notice for soil. MNA for groundwater.
AOC 49	No.3 Rheniformer	None	X	Benzo(a)pyrene (2.3 - 7); Benzo(a)anthracene (12); Benzo(b)fluoranthene (7.3); Dibenz(a,h)anthracene (1.2)	x	Arsenic (28.4 - 30.1)		X	NAN	NAN	Groundwater modeling o exceedences (see footnot	f PCOCs within this AOC tte 26).	demonstrated no		File a deed notice for soil. CMS recommendation is NFA for groundwater.

#### Table 1

### Summary of Corrective Measures Status of SWMUs and AOCs and Associated Soil and Groundwater Exceedences Chevron Perth Amboy Refinery Perth Amboy, New Jersey

						SOIL							GROUNDWATI	ER		
										USEPA TCLP (	Characteristic					
										Hazardous Was	ste Regulatory					
		VOCs		SVOCs	3		Metals			Lev	/el	VOCs	SVOCs	Metals		
		(mg/kg)		(mg/kg	)		(mg/kg)	)		(mg	ı/L)	(ug/L)	(ug/L)	(ug/L)		
		Source	of Data		Source	of Data		Source of Da	ıta	Benzene	Lead					
				Contaminant and			Contaminant and									
		Contaminant and		Range of			Range of					Contaminant and	Contaminant and	Contaminant and	Presence of	
		Range of		Exceedences of NJDEP			Exceedences of NJDEP					Range of	Range of	Range of	LNAPL	
		Exceedences of NJDEP		NRDSCC (NRDSCS for		Pre-	NRDSCC (NRDSCS for			Range of	Range of	Exceedences of NJDEP	Exceedences of NJDEP	<b>Exceedences of NJDEP</b>	Thickness	
SWMU / AOC	Description	NRDSCC CMS	CMS	Naphthalene)	CMS	CMS	Lead)	CMS CM	IS E	Exceedences	Exceedences	GWQS	GWQS	GWQS	> 0.01 Feet	Corrective Measures

#### Notes:

- 1. AOC = Area of Concern
- 2. CAMU = Corrective Action Management Unit
- 3. ISCO = In-Situ Chemical Oxidation
- 4. LNAPL = Light Non-Aqueous Phase Liquid
- 5. LRMs = LNAPL Removal Measures including vac trucks and belt skimmers
- 5. MNA = Monitoring Natural Attenuation
- 6. NAN = Not Analyzed
- 7. NFA = No Further Action
- 8. NFI = No Further Investigation
- 9. NJDEP = New Jersey Department of Environmental Protection
  10. NRDSCC = Non-Residential Direct Contact Soil Cleanup Criteria
- 11. NRDSCS = Non-Residential Direct Contact Soil Cleanup Standard
- 12. O & M = Operation and Maintenance
- 13. PCOCs = Principal Contaminants of Concern including benzene, benzo(a)pyrene and lead.
- 14. SRFI = Supplemental RCRA Facility Investigation
- 15. SVOCs = Semi-Volatile Organic Compounds
- 16. SWMU = Solid Waste Management Unit
- 17. TCLP = Toxicity Characteristic Leaching Procedure
- 18. TEL = Tetraethyl Lead
- 19. TOL = Total Organic Lead
- 20. USEPA = United States Environmental Protection Agency
- 21. VOCs = Volatile Organic Compounds
- 22. Blue shaded cells indicate the location of the corresponding SWMU or AOC is in the West Yard or Amboy Field, and not part of the CMS.
- 23. Green shaded cells indicate the location of the corresponding SWMU or AOC is in the North Field Extension, and not part of the CMS.
- 24. Grey shaded cells indicate NFA for the corresponding SWMU or AOC located in the Main, East, or Central Yards.
- 25. Soil exceedence data was obtained from the Full RCRA Facility Investigation (RFI) Report (2006 2008), SymUlAOC Assessment Report AOC 37 through AOC49 (2007), Supplemental RFI Report (2006 2008), and Corrective Measures Study Pre-Design Investigation Report (2006 2008). See Figures 2 through 4 for the soil contamination impacted SWMUs and AOCs located in the Main Yard, East Yard, and Central Yard, respectively.
- 26. Groundwater exceedence data was obtained from the sitewide groundwater sampling events conducted in the second quarter of 2007 for the East Yard, and third quarter of 2006 for the Central Yard. See Figures 2 through 4 for the groundwater contamination impacted SWMUs and AOCs located in each Yard.
- 27. Corrective Measures for SWMUs and AOCs' impacted soil and groundwater are based on their associated exceedence data and PCOCs groundwater modeled delineations demonstrating exceedences depicted in Figures 2 through 4. See Figures 23 through 25 for the Corrective Measures recommended to SWMUs and AOCs located in the Main Yard, East Yard, and Central Yard, respectively.